

To: Terry, Robert[Terry.Robert@epa.gov]
From: LEE, LILY
Sent: Sat 2/27/2016 1:02:15 AM
Subject: Resending attachments FW: 2006 release criteria - would they meet current requirements?
[Hunters Pt Basewide Rad 2006 release criteria table.pdf](#)
[HP Basewide Rad Removal Action Memo \(00000002\).pdf](#)

Lily Lee

Cleanup Project Manager

Superfund Division

U.S. Environmental Protection Agency, Region 9

75 Hawthorne St. (SFD-8-3)

San Francisco, CA 94105

Tel: 415-947-4187, Fax: 415-947-3518

www.epa.gov/region9/superfund

From: LEE, LILY
Sent: Friday, February 26, 2016 2:00 PM
To: Terry, Robert <Terry.Robert@epa.gov>
Subject: 2006 release criteria - would they meet current requirements?

Dear Rob,

Attached are the complete 2006 Hunters Pt Basewide Rad Removal Action Memo and the release criteria table that I excerpted from the full document. Below is an example of a ROD that references the same release criteria, but specific to Parcel B.

How would you translate these criteria to risk? Would these criteria still result in cleanups within the EPA risk range using current EPA approaches?

TABLE 8-4: REMEDIATION GOALS FOR RADIOLOGICALLY IMPACTED SURFACES AND GROUNDWATER

Parcel B Amended Record of Decision, Hunters Point Shipyard, San Francisco

| Remediation Goals for Radionuclides | | | |
|-------------------------------------|---------------------------------------|-------------------------|--------------------------------|
| Radionuclide | Surfaces (dpm/100cm ²) | | Construction Worker (pCi/L) |
| | Equipment, Waste ^a | Structures ^b | |
| Cesium-137 | 5,000 | 5,000 | 0.113 |
| Cobalt-60 | 5,000 | 5,000 | 0.0602 |
| Plutonium-239 | 100 | 100 | 14.0 |
| Radium-226 | 100 | 100 | 1.0 ^d |
| Strontium-90 | 1,000 | 1,000 | 10.8 |

Notes:

- a Based on "AEC Regulatory Guide 1.86" (1974). Goals for removable surface contamination.
- b Goals are based on 25 millirem per year (EPA does not believe this NRC regulatory goal is protective of the general public, and the HPS cleanup goals are more protective. This regulation applies to sites that are undergoing TCRAs and any additional remedial action required for radiologically impacted portions of IR Sites 7 and 18 that will be transferred to the general public (i.e., radiological contaminants.)
- c EPA PRGs for two future use scenarios
- d Goal is 1 pCi/g above background per agreement with EPA
- e Release criteria for water were derived from "Radionuclides Notice of Data Availability" by comparing the limits from two criteria and using the most conservative value.
- f Goal is for total radium concentration
- g Also applies to scanned surface soil at IR Sites 7 and 18

| | | | |
|-----------------|--|-------|-------------------------------|
| AEC | Atomic Energy Commission | IR | Insoluble |
| ARAR | Applicable or relevant and appropriate requirement | NRC | Nuclear Regulatory Commission |
| cm ² | square centimeter | pCi/g | picocuries per gram |
| dpm | disintegration per minute | pCi/L | picocuries per liter |
| EPA | U.S. Environmental Protection Agency | PRG | Protective Remedial Goal |

Lily Lee

Cleanup Project Manager

Superfund Division

U.S. Environmental Protection Agency, Region 9

75 Hawthorne St. (SFD-8-3)

San Francisco, CA 94105

Tel: 415-947-4187, Fax: 415-947-3518

www.epa.gov/region9/superfund